

1 We claim:

1 1. A method to generate a formatted trace for a second device embedded in a
2 first device, comprising the steps of:

3 providing source code comprising a trace entry;

4 compiling by said first device said source code to form a second device code

5 image comprising a trace description string and a trace description string address;

6 assigning said trace description string address as the traceId;

7 creating a database comprising said trace description string and said trace

8 description string address;

9 uploading said second device code image to said second device;

10 generating trace data using said second device code image;

11 downloading said trace data to said first device;

12 merging said trace data and said database; and

13 forming a formatted trace.

1 2. The method of claim 1, wherein said uploading step and said generating

2 step further comprise the steps of:

3 forming a stripped code by removing said trace description string from said

4 second device code image;

5 uploading said stripped code to said second device;

6 generating trace data using said stripped code.

1 3. The method of claim 1, further comprising the steps of:

2 providing trace directives;

3 detecting said trace entry;

4 forming a trace statement using said directives and said trace entry.

1 4. The method of claim 3, wherein said first device comprises a pre-

2 processor, further comprising the steps of:

3 providing a trace entry comprising a trace macro;

4 replacing by said pre-processor said trace macro with a function call using said

5 directives.

1 5. The method of claim 4, wherein said first device comprises a compiler,

2 further comprising the step of forming said trace statement by said compiler using said

3 directives.

1 6. The method of claim 5, wherein said second device comprises a trace

2 buffer, further comprising the steps of:

3 writing said trace data to said trace buffer;

4 detecting an error in said second device;

5 discontinuing writing trace data to said trace buffer.

1 7. An article of manufacture comprising a computer useable medium having

2 computer readable program code disposed therein to generate a formatted trace for a

3 second device embedded in a first device, the computer readable program code

4 comprising a series of computer readable program steps to effect:

5 receiving a source code comprising a trace entry;

6 compiling said source code to form a second device code image comprising a

7 trace description string and a trace description string address;

8 assigning said trace description string address as the traceId;
9 creating a database comprising said trace description string and said trace
10 description string address;
11 uploading to said second device said second device code image;
12 downloading trace data generated by said second device using said second device
13 code image;
14 merging said trace data and said database; and
15 forming a formatted trace.

1 8. The article of manufacture of claim 7, said computer readable program
2 code further comprising a series of computer readable program steps to effect:
3 forming a stripped code by removing said trace description string from said
4 second device code image;

5 uploading said stripped code to said second device;
6 downloading trace data formed by said second device using said stripped code.

1 9. The article of manufacture of claim 7, the computer readable program
2 code comprising a series of computer readable program steps to effect:
3 receiving trace directives;
4 detecting said trace entry;
5 forming a trace statement using said directives and said trace entry.

1 10. The article of manufacture of claim 9, the computer readable program
2 code comprising a series of computer readable program steps to effect:
3 receiving a trace entry comprising a trace macro;

4 replacing said trace macro with a function call using said directives.

1 11. The article of manufacture of claim 10, wherein said article of
2 manufacture comprises a compiler, the computer readable program code comprising a
3 series of computer readable program steps to effect forming said trace statement by said
4 compiler using said directives.

1 12. A computer program product usable with a usable with a programmable
2 computer processor having computer readable program code embodied therein method to
3 generate a formatted trace for a second device embedded in a first device, comprising:

4 computer readable program code which causes said programmable computer
5 processor to receive a source code comprising a trace entry;

6 computer readable program code which causes said programmable computer
7 processor to compile said source code to form a second device code image comprising a
8 trace description string and a trace description string address:

9 computer readable program code which causes said programmable computer
10 processor to assign said trace description string address as the traceId;

11 computer readable program code which causes said programmable computer
12 processor to create a database comprising said trace description string and said trace
13 description string address;

14 computer readable program code which causes said programmable computer
15 processor to upload to said second device said second device code image;

16 computer readable program code which causes said programmable computer
17 processor to receive trace data generated by said second device using said second device
18 code image;

19 computer readable program code which causes said programmable computer
20 processor to merge said trace data and said database; and
21 computer readable program code which causes said programmable computer
22 processor to form a formatted trace.

1 13. The computer program product of claim 12, further comprising computer
2 readable program code which causes said programmable computer processor to
3 computer readable program code which causes said programmable computer
4 processor to form a stripped code by removing said trace description string from said
5 second device code image;

6 computer readable program code which causes said programmable computer
7 processor to upload to said second device said stripped code;
8 computer readable program code which causes said programmable computer
9 processor to receive trace data generated by said second device using said stripped code.

1 14. The computer program product of claim 12, further comprising:
2 computer readable program code which causes said programmable computer
3 processor to receive trace directives;
4 computer readable program code which causes said programmable computer
5 processor to detect said trace entry;

6 computer readable program code which causes said programmable computer
7 processor to form a trace statement using said directives and said trace entry.

1 15. The computer program product of claim 14, further comprising:
2 computer readable program code which causes said programmable computer
3 processor to receive a trace entry comprising a trace macro;
4 computer readable program code which causes said programmable computer
5 processor to replace said trace macro with a function call using said directives.

1 16. The computer program product of claim 14, further comprising computer
2 readable program code which causes said programmable computer processor to form said
3 trace statement using a compiler and said directives.